

AMENDMENTS TO THE CLAIMS:

Please amend, without prejudice or disclaimer, Claims 1-20 as follows:

1. (Currently Amended) A Superconducting cable comprising:

a support with an inner surface which defines a channel wherein a cryogenic

fluid flows;

at least a superconducting conductor [[and]]positioned externally to said

support;

a cryostat positioned externally to the superconducting conductor, said cryostat including a thermal insulation enclosed between an inner tube and an outer coaxial tube[[s,]]; and

~~wherein a protecting element is provided~~ positioned between the superconducting conductor and the inner tube of the cryostat.

2. (Currently Amended) The Superconducting cable according to claim 1 wherein the protecting element provided between the superconducting conductor and the [[-]]inner tube has a substantial constant thickness.

3. (Currently Amended) The Superconducting cable according to claim 1 wherein the protecting element has a smooth internal surface.

4. (Currently Amended) The Superconducting cable according to claim 1 wherein the protecting element has a firm and flexible external surface.

5. (Currently Amended) The Superconducting cable according to claim 1 wherein the protecting element comprises one or more layers.

6. (Currently Amended) The Superconducting cable according to claim 5 wherein the protecting element is made of two layers, the inner being smooth and the outer being firm and flexible.

7. (Currently Amended) The Superconducting cable according to claim 1 wherein the thickness of the protecting element is equal or greater than about 0.2 mm.

8. (Currently Amended) The Superconducting cable according to claim 7 wherein the thickness of the protecting element is ~~comprised~~ between about 0.2 mm and about 3 mm.

9. (Currently Amended) The Superconducting cable according to claim 8 wherein the thickness of the protecting element is ~~comprised~~ between 0.4 mm and 1 mm.

10. (Currently Amended) The Superconducting cable according to claim 1 wherein the protecting element comprises a material selected from polymeric materials, metals, carbon paper, kraft paper, and combination thereof.

11. (Currently Amended) The Superconducting cable according to claim 10 wherein the protecting element is made of polymeric material.

12. (Currently Amended) The Superconducting cable according to claim 11 wherein the protecting element is made of polytetrafluoroethylene.

13. (Currently Amended) The Superconducting cable according to claim 10 wherein the protecting element is made of copper.

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14. (Currently Amended) The Superconducting cable according to claim 5 wherein at least one of the layer~~[[()]]s~~[[()]]~~~~ of the protecting element comprise~~[[()]]s~~[[()]]~~~~ at least one tape, wire, sheet or combination thereof.

15. (Currently Amended) The Superconducting cable according to claim 14 wherein the at least one tape, or sheet is positioned with juxtaposed windings or rims on the superconducting conductor.

16. (Currently Amended) The Superconducting cable according to claim 1 wherein said cable ~~which~~ has a clamped head configuration.

17. (Currently Amended) The Superconducting cable according to claim 1 wherein said cable ~~which~~ is cooled with liquid nitrogen at a temperature typically of from about 65 to about 90 K.

18. (Currently Amended) The Superconducting cable according to claim 1 wherein the superconducting material is an oxide of bismuth, lead, strontium, calcium, and copper.

19. (Currently Amended) A Method for protecting a superconducting material of a superconducting cable ~~comprising at least a superconducting conductor and a cryostat positioned externally to the to the superconducting conductor, said cryostat including a thermal insulation enclosed between an inner and an outer coaxial tubes, from~~ ~~[[the]]~~ mechanical damages ~~to the superconducting material of the superconducting conductor due to the~~ resulting from contact with ~~[[the]]~~ an inner tube of ~~[[the]]~~ a cryostat, comprising: ~~which comprises the phase of~~

providing including a protecting element between the superconducting conductor and the inner tube of the cryostat; and

wherein said superconducting cable comprises:

a support with an inner surface which defines a channel wherein a cryogenic fluid flows;
a superconducting conductor positioned externally to said support;
a cryostat positioned externally to the superconducting conductor, said cryostat including a thermal insulation enclosed between an inner tube and an outer coaxial tube.

20. (Currently Amended) A Current transmission/distribution network comprising:

at least one superconducting cable comprising a support with an inner surface which defines a channel wherein a cryogenic fluid flows; ~~at least a~~ superconducting conductor positioned externally to said support; and a cryostat positioned externally ~~to the~~ to the superconducting conductor, said cryostat including a thermal insulation enclosed between an inner tube and an outer coaxial tube[[s,]]; and

~~wherein a protecting element is provided~~ positioned between the superconducting conductor and the inner tube of the cryostat.